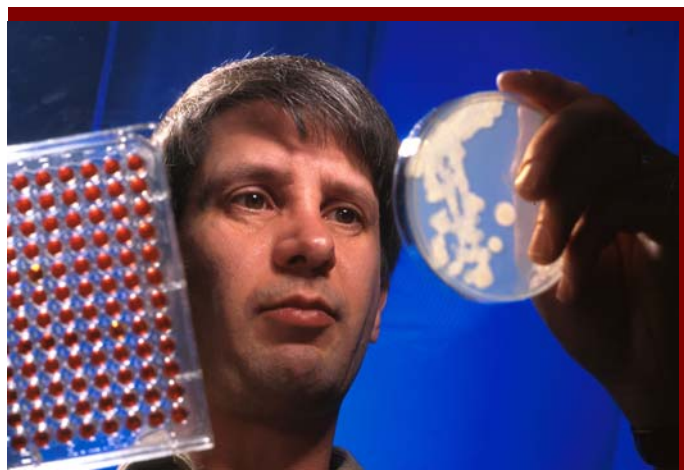


Gum Arabic Substitute

What is this technology?

Alternan is a microbial gum that simulates the viscosity of gum arabic, a natural, water-soluble thickener and emulsifier. This technology is a method to prepare low viscosity alternan and combine it with protein to make emulsifying gum.



What problem does it address?

Sudan, a politically unstable nation subject to US embargo, is the only source of gum arabic. The need to import gum arabic can be reduced or even eliminated by developing a substitute produced from US sugar cane, beet sugar and dairy by-products.

Who could use this technology?

This substitute would be used by manufacturers of products such as:

- Beverages and flavorings (fruit drinks, soda, etc)
- Desserts
- Encapsulated (controlled release) technologies
- Pharmaceuticals
- Films and coatings
- Lithographic inks

This is a niche market; the gum arabic market in the US is \$10 - \$20 million per year

How is this technology unique?

Starch chemical derivatives are currently available as gum arabic substitutes, however the properties of these materials do not meet market requirements.

CRADA Opportunity

This technology needs partners for application demonstration, process development and scale-up.

Stage of Development

Biodegradable mulch film has been tested successfully on watermelons, by the University of Florida; on trees, by MeadWestvaco in Missouri; on melons, by Cornell University; on tomatoes and peppers, by University of Illinois Extension/Master Gardeners; and in home garden applications, by Gardener's Supply.

IP Status

The concept has been proven on the laboratory scale.

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